

Appendix B: Cover Page

**PATIENTS PERCEPTION AND ACCEPTANCE TOWARDS
TELE NEPHROLOGY**

Dissertation Submitted to



The IIHMR University, Jaipur

for the partial fulfillment for the award of the

degree of Master of Business Administration

(MBA)

in

Hospital and Health Management/Pharmaceutical

Management/Development Management

by

Ria Gulgulia

Under the Supervision and Guidance of

Dr. Anoop Khanna

Appendix C: Title Page

PATIENTS PERCEPTION AND ACCEPTANCE TOWARDS
TELE NEPHROLOGY

Dissertation Submitted to



The IIHMR University, Jaipur

for the partial fulfillment for the award of the

degree of Master of Business Administration

(MBA)

in

Hospital and Health Management/Pharmaceutical

Management/Development Management

by

Ria Gulgulia

Under the Supervision and Guidance of

Dr. Anoop Khanna

DECLARATION BY STUDENT

I hereby declare that this dissertation titled “PATIENT PERCEPTION AND ACCEPTANCE TOWARDS TELE NEPHROLOGY” is the bonafide record of my original research work. I declare that it has not been shared with any other university or institution for the award of any degree or diploma. Information derived from published or unpublished work from others has been duly acknowledged in the text.

Name of the student: Ria Gulgulia

Date: 04-05-2023

ABSTRACT

1. **TITLE:** Patient's perception and acceptance towards tele nephrology.
2. **INTRODUCTION:** Dialysis is a procedure performed on patients with improper functioning of kidneys. It is a way to treat advanced renal failure and continue an active life despite failing kidneys. Maximum thrice a week dialysis is performed on alternative days. Telemedicine can enable remote monitoring of patient's health status, provide better access to medical consultations, support, and facilitate communication between providers and patients.
3. **RESEARCH QUESTION:**
 - What are the preferences of patients and healthcare providers towards the use of telehealth technology for dialysis?
 - What is the awareness level of adults towards tele nephrology?
4. **OBJECTIVES:**
 - To study perception and readiness of patients towards tele nephrology?
5. **METHODOLOGY:**
 - **Study design:** Cross-sectional study design
 - **Study setting:** DCDC Kidney Care
 - **Sample size:** 500 Patients
 - **Study tool:** Primary data was collected using an online questionnaire. Stratified sampling method is used for sampling. Responses were collected from 500 patients of DCDC Kidney Care. 450 responses were received, and 250 responses were duly filled and taken into consideration. Secondary data was mainly collected from PubMed, official websites, published articles and google scholar.
 - **Analysis:** Analysis and interpretation were done using SPSS, MS Excel and graphical representations to find out the readiness to accept the concept of tele nephrology.
6. **CONCLUSION:**

Telemedicine is a useful platform for patients undergoing irregular hemodialysis which triggers a set of clinical indicators which result in ineffective health management. Patients skip their dialysis schedule due to irresponsible behavior towards their health, financial burden or else patient is dead before dialysis session. Telehealth technology is a very effective method for those patients who face barriers in accessing traditional in-person care such as transportation or scheduling conflicts.

ACKNOWLEDGEMENT

I would like to recognize my solemn thanks to our institute, **Indian Institute of Health Management and Research** to give me such an opportunity so that we can enhance knowledge in hospital and health related distribution.

I am genuinely thankful to **Mr. Aseem Garg**, CEO of DCDC Kidney Care for giving me an opportunity to do the dissertation in such a well reputed organization.

I would like to express my warm gratefulness to **Mr. Rahul Bhardwaj**, Vice President, operations department, DCDC Kidney Care, for his support. From his busy schedule he took some time for me, helps me to know how the organization run and taught various things in order to facilitate my training. He was always there to help; without him I can't imagine completing my dissertation in a fluent way.

Thanks to my Institutional mentor Dr. Anoop Khanna at IIHMR University, for completing this dissertation and guiding me in every step and clearing all my doubts about the dissertation. And last but not least, thanks to my family and friends for their care and support, without them it is impossible to complete my dissertation.

TABLE OF CONTENTS

S.No.	Contents	Page number
1.	Abstract	4
2.	Introduction	8
3.	Literature review	10
4.	Methodology	12
5.	Discussion	25
6.	Conclusion	27
7.	Recommendation	27
8.	References	28

List of figures:

Figure no.	Description
1.	Source of information regarding teleconsultation.
2.	Relation between academic qualification and preference opted.
3.	Relation between occupation status and preference opted.
4.	Relation between socio-economic category and preference opted.

List of tables:

Table number	Description
1.	Description of characteristics of study population (n=250).
2.	Ready to accept tele nephrology approach.
3.	Distribution of preference according to academic qualification
4.	Chi-square test to find association between education and behavior of respondents towards opting.
5.	Distribution of occupation status and preference opted
6.	Chi- square test to find association between occupation status and preference opted.
7.	Distribution between socio-economic class and choice of consultation opted.
8.	Chi-square test to find association between socioeconomic class and ready to accept tele nephrology

INTRODUCTION

Telemedicine, which provides remote access to medical services and eliminates the distance between patients and medical professionals, has emerged as a revolutionary healthcare alternative in recent years. The discipline of nephrology and dialysis stands out as a prospective sector for its implementation among the other areas where telemedicine has demonstrated enormous potential. The incorporation of telemedicine into nephrology practice has the potential to revolutionize the provision of dialysis services given the expanding global prevalence of kidney disease and the rising demand for renal care.

Through the use of information and communication technology, telemedicine allows doctors to detect and treat patients' ailments while also enhancing their general health.

This technology was developed with the intention of improving and streamlining healthcare access for remote populations. Later, telemedicine's use expanded and was no longer solely restricted to faraway regions as technology evolved and people's perceptions changed. Adoption of technology has reduced reliance on medical institutions and allowed for more effective and efficient care delivery at home. Importantly, patients who are geographically dispersed can receive specialized medical care through telemedicine, which is the delivery of medical services or information over electronic networks. Furthermore, this platform has the ability to support home-based telemedicine platforms have grown more widespread and can now offer affordable, high-quality care.

This technology is used in nephrology to improve patient and staff adherence to hemodialysis treatment programmes and to strengthen the bond between patients and their care takers. With the use of such technology, dialysis treatments, patients who live in rural areas will benefit and be able to maintain a high level of independence. Complex data, including medical records, images, audios, movies, and even the outcomes of physical examinations, can be transferred. Furthermore, this platform has the ability to assist home-based platforms for telemedicine have expanded more broadly and can now offer high-quality, affordable care.

This technology is used in nephrology to improve patient and staff adherence to hemodialysis treatment programmes and to strengthen the bond between patients and their care takers. Using such technology, it is possible to send complex data, such as medical records, pictures, audio files, movies, and even the findings of physical examinations. Remotely monitored dialysis patients have the ability to interact with medical specialists to address any urgent issues or arrange a monthly checkup, as well as have their therapy observed and documented in real time. Remote monitoring enhances patient safety by keeping an eye on important treatment components, being able to assess compliance with advised therapy, and automating the collecting of treatment data. Prior to Covid-19, tele-nephrology was effectively utilized to treat patients in the US, Canada, and Australia. Teleconsultation improved patients' quality of life while facilitating patient access to care and aiding in diagnosis.

An estimated 2 lakh persons are diagnosed with serious kidney disease each year, and a

significant fraction of the adult population is thought to have some sort of kidney disease. 90% of them die as a result of lack of accessibility to dialysis or inexpensive kidney transplantation, which is a significant burden on society.

Basically, telemedicine can save patients money and time while increasing accessibility to transplants.

Over the years, nephrology has made notable strides, particularly in the treatment of end-stage renal disease (ESRD). Dialysis has historically relied on in-person visits to specialized dialysis facilities as a life-sustaining treatment for people with ESRD. However, this traditional method has a number of drawbacks, such as regional restrictions, restricted access to specialized care, and the stress of frequent patient travel. The use of telemedicine into nephrology practice has recently come to light as a viable approach to overcome these difficulties and transform the provision of dialysis treatments.

As a branch of telemedicine, teleconsultation has drawn a lot of attention as a method of delivering follow-up treatment and distant medical consultations. Teleconsultation is a cutting-edge method for bringing patients and healthcare professionals together in the context of dialysis, enabling the delivery of specialized renal treatment from a distance.

LITERATURE REVIEW

Title of the study	Author's name, year	Objective of the study	SALIENT FEATURE
Tele nephrology an emerging platform for Renal Health care	Farrukh M. Koraishy et al. 2020	This study provides the advantages and disadvantages of tele nephrology.	○ The Tele Nephrology Platform offers synchronous videoconferencing for direct doctor-patient care. ○ Primary and specialized healthcare can be provided to patients who are geographically isolated via electronic technologies for roughly 20% of the US population.
Telemedicine and Hemodialysis Care during the COVID-19 Pandemic: An Integrative Review of Patient Safety, Healthcare Quality, Ethics, and the Legal Considerations in Singapore Practice	Sabrina Haroon et al. 2022	To comprehend three key elements of Singapore's safe and effective healthcare delivery, telemedicine's ethical and legal ramifications, and patient safety and quality.	○ Adequate patient care and safety are required for the telemedicine application of distant clinical care for hemodialysis. ○ In the previous year, telemedicine was utilized by medical personnel and nephrologists to deliver healthcare via online consultation or remote monitoring. ○ Telemedicine's ethical and legal ramifications must be understood.
Utility and patient acceptance of telemedicine in nephrology	Kristin George et al. 2022	It examines the acceptance and utilization of tele nephrology services at public hospital.	○ Tele nephrology offers enormous potential to bring nephrology care to the most remote areas of developing nations like India, where the bulk of the population lives outside of large cities and has

			limited access to healthcare.
Impact of telehealth interventions added to peritoneal dialysis-care: a systematic review.	Geertje K. M. Biebuyck et al. 2022	This study assessed the effects of telehealth interventions on clinical outcomes, cost-effectiveness, and quality of life	○ Analyzed how telehealth interventions added to peritoneal dialysis therapy affected line quality, clinical results, and cost-effectiveness.
Telemedicine for Outpatient Care of Kidney Transplant and CKD Patients	Sebastin Lambooy et al. 2021	To evaluate the clinical outcomes, viability, and practicality of telehealth videoconferencing.	○ When compared to conventional care, telehealth video conferencing was practical and long-lasting. ○ Telehealth video conferences increase access in rural regions, but there is little information available about their use and effectiveness among patients with chronic renal disease and kidney transplants.
Telehealth and Kidney Disease Care	Susie Q. Lew et al.	This article explains how telehealth improves patient happiness, healthcare utilization, and efficiency measures.	○ The use of telehealth and remote monitoring enhances patient satisfaction and results while lowering healthcare costs, and its expanded use has the potential to enhance patient-centered care for those receiving home dialysis.

METHODOLOGY

I. RESEARCH QUESTION:

- How do patients and medical professionals feel about using telemedicine technology for dialysis?
- What is the awareness level of adults towards tele nephrology?

II. RESEARCH OBJECTIVE:

- To study perception and readiness of patients towards tele nephrology?

III. STUDY AREA: DCDC Kidney Care, New Delhi

IV. SAMPLING TECHNIQUE USED: Stratified sampling technique.

V. SAMPLE SIZE:

The sample size is the number of participants being involved in the study. The form was circulated among 500 patients. The total responses were 450 forms out of which that were duly filled and taken into consideration were 250.

VI. STUDY DESIGN:

Cross sectional study design is used to complete this research study.

VII. HYPOTHESIS:

H₀: Indian adults are not aware and ready to use tele nephrology.

H_a: Indian adults are aware and ready to use tele nephrology.

VIII. STUDY TOOL:

A self-administered online google form was created to gather information from the target audience. Stratified sampling technique was done to reach the respondents. The questionnaire was being circulated with the help of the central managers of DCDC kidney care to different states of our country. Email or WhatsApp [a social media platform] was used to share the link of the form. The form was circulated among 50 people approximately and then further requested to share it between patients or their family or relatives of each Centre. Thus, the form reached 100 centers of DCDC Kidney care. The data used in the analysis was collected between 18th April,2023 to 25th April,2023. Through the questionnaire, patient's attitude, knowledge, and acceptance towards tele nephrology was evaluated. Ethical approval was taken from respondents. It took 2 to 3 minutes to complete this survey. The information collected was entirely confidential and protected at all stages of the

study. All data were either filled through computer or mobile thus decreasing error in data entry.

The online questionnaire tool used to gather data has following details:

a. KNOWLEDGE AND AWARENESS BASED:

This section consists of questions which were primarily designed to assess the knowledge and awareness of participants about tele nephrology. Further a few questions were asked about the issues or challenges they may face while using telemedicine platform to get a glimpse about their knowledge and awareness about telemedicine or telehealth platform.

b. PERCEPTION BASED:

Here in this section, questions were asked to assess the perception of respondents towards use of tele nephrology. In response to various assertions, respondents were asked to select one of the following: strongly agree, agree, neutral, disagree, or strongly disagree. Here, neutral denotes that respondents' preferences are still unclear, whereas strongly agree and agree denote that telenephrology will be a sensible decision for respondents.

c. PRACTICE BASED:

This section illustrates the course of action that respondents would take in response to questions on various tele nephrology-related scenarios. Statements in this part required respondents to select one of five options on a Likert scale: 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, or 5-strongly agree. A five-point scale that was further divided into three categories—1, 2, 3, and 4,5—was used to analyse these claims. Whereas Neutral represents respondents who are unsure of their decision to use tele nephrology and Good depicts respondents who are prepared to use this tele nephrology platform, Bad represents respondents who categorically deny utilizing tele nephrology.

d. DEMOGRAPHIC BASED:

This question comprised of questions related to basic demographic details of respondents like age, gender, and qualification they have. These responses would help the analysis in a more concise way to get a clear picture.

IX. STUDY DURATION:

This study is conducted from 20th February, 2023 to 19th May, 2023.

X. ANALYSIS:

Using Excel and SPSS software, the demographic and socioeconomic features of the study population (n=250) were examined for interpretation.

TABLE 1: Description of the research population's characteristics (n=250)

PATIENT CHARACTERISTICS	N (%)
Age, mean $\pm$ SD (range)	42.88 $\pm$ 13.32 (18 – 82)
GENDER • Male • Female	176 (70.4) 74 (29.6)
INFORMANT • Self • Spouse • Son • Daughter • Parent • Relative	109 (43.6) 13 (5.2) 31 (12.4) 16 (6.4) 7 (2.8) 74 (29.6)
LOCATION STATUS • Village • Town • City	153 (15.2) 59 (23.6) 38 (61.2)

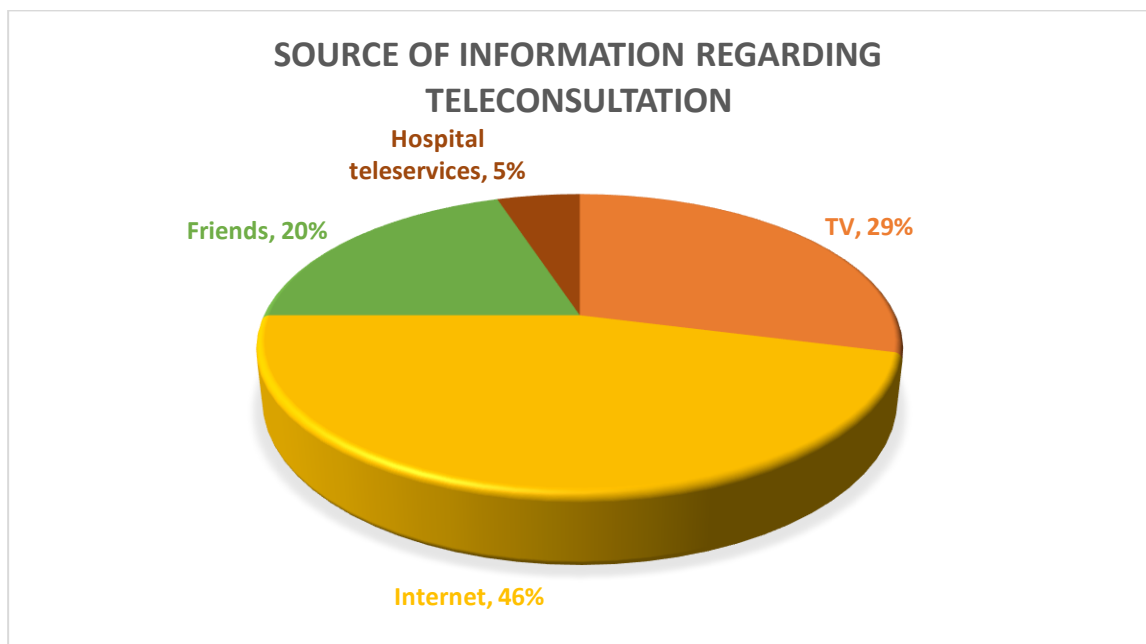
LIVING STATUS • Joint family • With parent • With parent and children • With children • With husband	134 (53.6) 55 (22.0) 11 (4.4) 45 (18.0) 5 (2.0)
EDUCATION STATUS • Illiterate • Less than 8th standard • Primary schooling • Secondary schooling • Senior secondary schooling • Graduate • Postgraduate	11 (4.4) 55 (22.0) 50 (20.0) 43 (17.0) 35 (14.0) 25 (10.0) 31 (12.4)
EMPLOYMENT STATUS	

• Unemployed • Unskilled worker • Skilled worker • Professional	163 (65.2) 20 (8.0) 35 (14.0) 32 (12.8)
SOCIO-ECONOMIC STATUS • Lower • Upper lower • Lower middle • Upper middle • Upper	0(0) 88 (35.2) 30 (12.0) 99 (39.6) 33 (13.2)
KNOWLEDGE ABOUT CURRENT MEDICATIONS • Have knowledge • Needs help	134 (53.6) 116 (46.4)
PATIENTS ACCOMPANIED BY • None • Parents • Daughter • Son • Spouse • Friend • Relative	30 (12.8) 22 (8.8) 25 (10.0) 45 (18.0) 23 (9.2) 24 (9.6) 81 (32.4)

The study population (n=250) had a mean age of 42.88 ± 13.32 (18-82) years, and 70.4% of the participants were men. Table 1 provides information about the demographic and socioeconomic background of the patients. The patients who were being interviewed had chronic renal disease, kidney transplantation, and were receiving dialysis. 43.6% of patients filled out the form alone, with the remaining instances going to family members or carers. Only 12% of patients had a postgraduate degree, and only 22% had completed their primary education. Nearly 65% of patients relied on their family members for financial support because they were unemployed. Ninety-nine patients (or 40%) fall into the upper middle socioeconomic class, and about 12% of patients do as well.

About one-fourth of patients were from the town, while about 60% of patients lived in the city. Nearly 32% of patients had a companion with them when they visited the hospital.

Figure 1: Source of information regarding teleconsultation



Internet services were the most popular source of information on teleconsultation services (46%) followed by television (29%).

58 percent of patients are willing to embrace the tele nephrology consultation technique. Nearly 87% of patients feel at ease discussing their reports over the phone. The most important benefit of teleconsultation according to respondents is the reduction in risk of infection and it is cost-effective. One-fourth of patients are also ready to accept the combination of teleconsultation and in-person consultation.

Table 2: Ready to accept tele nephrology approach.

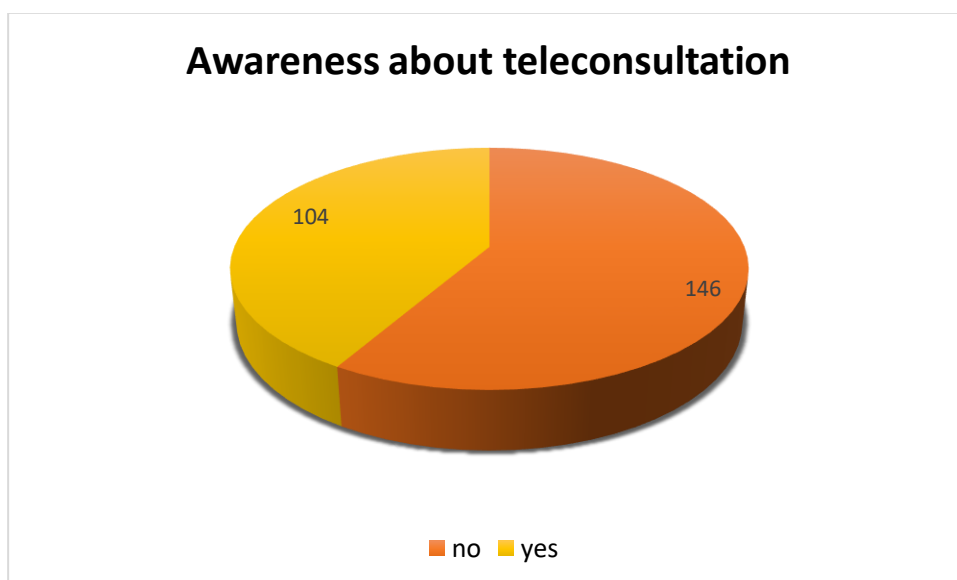
Confident in expressing concerns.	N (%)
• Yes	221 (88.4%)
• No	29 (11.6%)
Comfortable to share reports over phone.	
• Comfortable	217 (86.8%)
• Needs help	33 (13.2%)
Barriers during teleconsultation	
• Lack of exposure to technology	33%
• Lack of education	
• Poverty	35%

Internet accessibility	9% 23%
The most significant advantage of teleconsultations. - Cost-effective - Lowest risk of infection - Travelling is avoided	41% 52% 7.0%
Preferred mode of consultation - Teleconsultation - In-person consultation - Both	147 (58.8%) 41 (16.4%) 62 (24.8%)

When patients were asked about the issues which they may face during teleconsultation, the maximum response was lack of education (35%) and not able to access this technology easily due to internet connectivity issue. Although the above table shows the most preferred mode of consultation is teleconsultation (58.8%) followed by combination of both mode teleconsultation and in-person consultation (24.8%).

Although tele nephrology is a new concept but still respondents feel that this approach will be a viable approach in providing quality healthcare.

More than 80% of patients are comfortable in sharing their concern and reports over phone.



After Covid -19 people started adopting teleconsultation to mitigate the risk of infection. As most of the respondents were not educated, maximum of them were not aware about teleconsultation services.

Table 3: Distribution of preference according to academic qualification.

			Tele nephrology=1, in-person=2, both=3			Total
			1	2	3	
<u>EDUCATION STATUS</u>	Illiterate	Count Percentage	10 90.9%	1 9.1%	0 0.0%	11 100.0%
	Less than 8th standard	Count Percentage	32 58.2%	10 18.2%	13 23.6%	55 100.0%
	Primary schooling	Count Percentage	32 64.0%	6 12.0%	12 24.0%	50 100.0%
	Secondary schooling	Count Percentage	30 69.8%	3 7.0%	10 23.3%	43 100.0%
	Senior secondary schooling	Count Percentage	16 45.7%	12 34.3%	7 20.0%	35 100.0%
	Graduate	Count Percentage	10 40.0%	6 24.0%	9 36.0%	25 100.0%
	Postgraduate	Count Percentage	17 54.8%	3 9.7%	11 35.5%	31 100.0%
	Total	Count Percentage	147 58.8%	41 16.4%	62 24.8%	250 100.0%

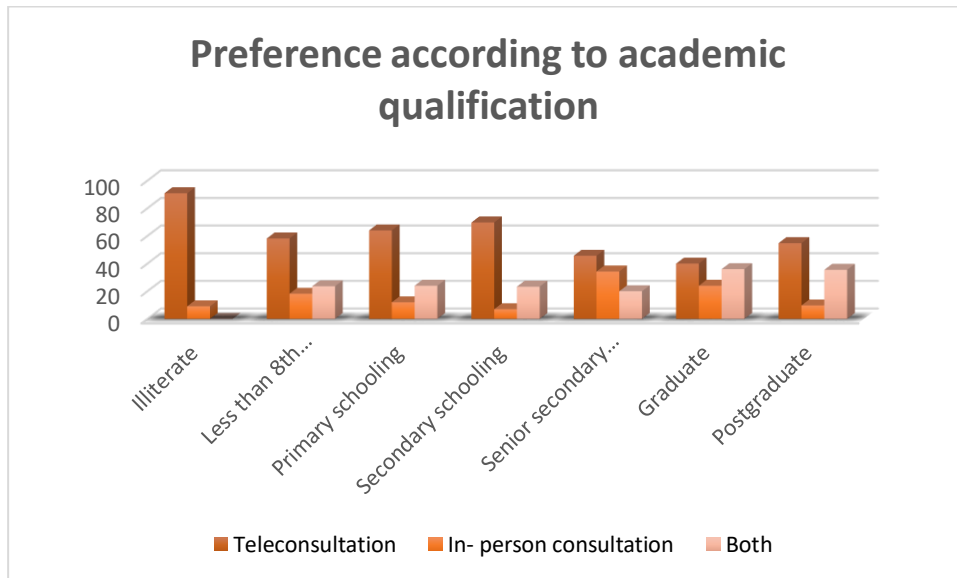
--	--	--	--	--

Table 4: Chi-square test to find association between education and behavior of respondents towards opting.

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23.420 ^a	12	.024

It has been noted that the majority of respondents support choosing video consultation or a combination of conventional therapy and tele nephrology. According to the chi square test mentioned above, there is a substantial correlation between academic achievement and respondents' desire for telemedicine.

Figure 2: Relation between academic qualification and preference opted.



After the covid pandemic respondents believe telehealth is the best option which reduces risk of infection and provides quality healthcare.

According to the analysis it is observed that patients are ready to accept tele nephrology and share their concerns through video consultation.

Table 5: Distribution of occupation status and preference opted.

			Tele nephrology=1, in-person=2, both=3			Total
			1	2	3	
Occupation status	Unemployed	Count Percentage	104 63.8%	21 12.9%	38 23.3%	163 100.0%
	Unskilled worker	Count Percentage	8 40.0%	5 25.0%	7 35.0%	20 100.0%
	Skilled worker	Count Percentage	17 48.6%	12 34.3%	6 17.1%	35 100.0%
	Professional	Count Percentage	18 56.3%	3 9.4%	11 34.4%	32 100.0%
Total		Count Percentage	147 58.8%	41 16.4%	62 24.8%	250 100.0%

Table 6: Chi- square test to find association between occupation status and preference opted.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	15.470 ^a	6	.017

From the above analysis it shows that most of the unemployed and professional occupation believe telehealth is a better option than in-person consultation. Unskilled workers opted for both types of consultation including tele nephrology and personal consultation. The above chi-square test shows string significant association between occupation and choice of treatment opted by kidney patients.

Figure 3: Relation between occupation status and preference opted.

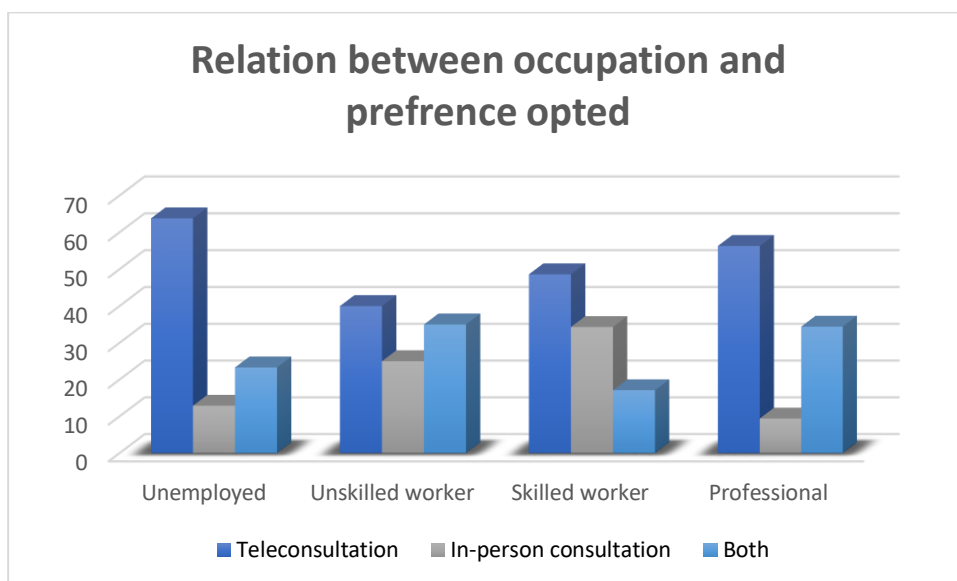


Table 7: Distribution between socio-economic class and choice of consultation opted.

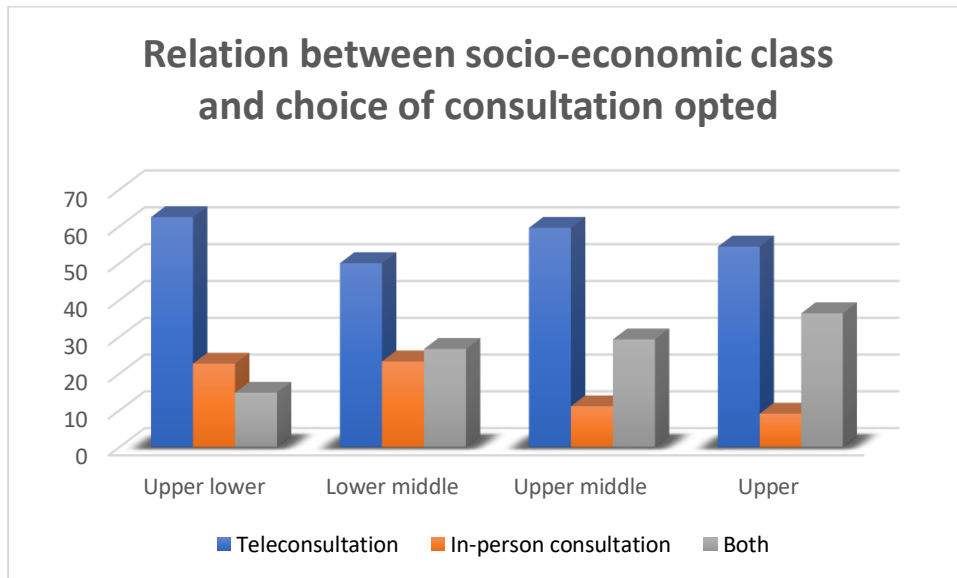
			Tele nephrology=1, in-person=2, both=3			Total
			1	2	3	
Socioeconomic status	Upper lower	Count	55	20	13	88
		Percentage	62.5%	22.7%	14.8%	100.0%
	Lower middle	Count	15	7	8	30
		Percentage	50.0%	23.3%	26.7%	100.0%
	Upper middle	Count	59	11	29	99
		Percentage	59.6%	11.1%	29.3%	100.0%
	Upper	Count	18	3	12	33
		Percentage	54.5%	9.1%	36.4%	100.0%
Total		Count	147	41	62	250
		Percentage	58.8%	16.4%	24.8%	100.0%

Table 8: Chi-square test to find association between socioeconomic class and ready to accept tele nephrology.**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.698 ^a	6	.048

Above analysis interprets tele nephrology practice is a better option rather than in-person consultation. Respondents are prepared to accept this change as it is cost-effective and efficient way to have quality healthcare.

Figure 4: Relation between socio-economic category and preference opted.



The chi-square test shows significant association between socio-economic class and choice to opt tele nephrology in future. The above graph shows the relation between socio-economic category and preference opted by respondents. The graph interprets that most of the respondents who opted teleconsultation belongs to upper lower or upper middle category and respondents who believe that combination of both teleconsultation and in-person consultation is better mostly belongs to upper category.

DISCUSSION:

In this study, we discovered that the tele nephrology technique will be a practical and popular choice among renal patients that lowers out-of-pocket expenses. Our findings are in line with those from industrialized countries, where teleconsultations have reduced travel costs and carbon dioxide emissions related to travel, ensured medication adherence with fewer hospitalizations, and are generally accepted by patients.

Many people, it has been observed, equate telemedicine with doctor phone calls, using health technologies to enhance health, and looking up health information online.

It has been found that adults in India are better knowledgeable of tele-nephrology and the potential difficulties associated with using video consultation from a nephrologist. Lack of access to technology and poverty are two key obstacles to this practice. Patients in New York and Columbia can successfully receive tele nephrology services. In most developed nations, telehealth videoconferencing is now covered by reimbursement claims, reducing the financial burden of medical consultations. Globally, the use of video-based telemedicine for routine kidney care is expanding, and patients with kidney diseases of all types have accepted it. In India, patients receiving peritoneal dialysis have previously benefited from effective tele nephrology services. Through greater adherence, early catheter problem detection, a reduction in the frequency of clinical visits, and improved patient-provider communication, remote monitoring of patients receiving automated peritoneal dialysis significantly reduced hospitalization rates.

The majority of the patients in our study, who were either young adults or middle-aged and from a moderate socioeconomic group, were unemployed and dependent on family members for financial support. This category of patients is representative of those who frequent our hospital and probably all other significant public hospitals in India. In addition to the fact that most patients desire to accept and use the tele nephrology approach, our observation and analysis reveal that certain patients only want this choice. Regular teleconsultation combined with need-based in-person consultation minimizes the number of hospital visits, travel expenses, and length of stay while also lowering the risk of infection.

According to this study, patients view the idea of tele nephrology favorably and believe it will be beneficial if it is implemented into the healthcare system. This study concludes that our patients need telehealth services for kidney therapy as it is not yet implemented in India, even if the majority of patients are uneducated yet nonetheless aware of their health. It is inferred that Indian adults think that communication and information technology may play a role in the healthcare sector and that the concept of tele

nephrology can address the problem of an excess of patients and a lack of practitioners. Nevertheless, this study gives reason for optimism that tele nephrology can provide consistent patient monitoring and appropriate management without sacrificing patient satisfaction or traditional medical care.

CONCLUSION:

In a country like India, where patients are largely found in rural regions and have limited access to specialized treatment, tele nephrology has a huge potential to promote the delivery of high-quality healthcare. The incorporation of tele nephrology services into our current healthcare system is critically required in order to improve access to care and deliver high-quality healthcare services without compromising outcomes. Tele nephrology has a significant potential to bring high-quality nephrology care to the most rural areas of developing nations like India, where the bulk of the population lives outside large cities and has limited access to healthcare.

Despite all the obstacles, most patients find tele nephrology to be acceptable, which shows there is a substantial market for this type of healthcare delivery.

RECOMMENDATION:

Since it is observed that Indian adults are ready to accept this tele nephrology concept as promising innovation in healthcare industry. They have a positive mindset towards tele nephrology services. I recommend the private and public sector to invest more in this field and design more techniques for patients.

REFERENCES:

- Farukkh M. Koraishy, Rajeev Rohtagi. Tele Nephrology: An emerging platform for delivering renal healthcare. 2020 June, 76(3): 417-426
- Sebastiaan Lambooy, Rathika Krishnasamy, Andrea Pollock, Gerald Hilder, Nicholas A. Gray. Telemedicine for outpatient care of kidney transplant and CKD patients. 2021 may. 6(5): 1265-1272
- George, K., Subbiah, A., Yadav, R.K. *et al.* Utility and patient acceptance of telemedicine in nephrology. *J Nephrol* 35, 2325–2331 (2022). <https://doi.org/10.1007/s40620-022-01471>
- Lew, Susie Q.1; Sikka, Neal2. Telehealth and Kidney Disease Care: Role after the Public Health Emergency? *CJASN* 16(12):p 1784-1786, December 2021. | DOI: 10.2215/CJN.13651021
- Sabrina Haroon, Teck Chuan Voo. Telemedicine and Hemodialysis Care during the COVID-19 Pandemic: An Integrative Review of Patient Safety, Healthcare Quality, Ethics and the Legal Considerations in Singapore Practice. 2022 April, 19(9)
- Paiva MDGMN, Tinôco JDS, Fernandes MIDCD, Dantas JR, Nogueira ILA, Medeiros ABA, Lopes MVO, Lira ALBC. Ineffective Health Management in Hemodialysis Patients: Diagnostic Accuracy Study. *Clin Nurs Res*. 2019 Jun;28(5):602-614. doi: 10.1177/1054773817754021. Epub 2018 Jan 24. PMID: 29363338.
- Lu W, Ren C, Han X, Yang X, Cao Y, Huang B. The protective effect of different dialysis types on residual renal function in patients with maintenance hemodialysis: A systematic review and meta-analysis. *Medicine (Baltimore)*. 2018 Sep;97(37):e12325. doi: 10.1097/MD.00000000000012325. PMID: 30212979; PMCID: PMC6156018.
- Lew, Susie Q.1; Sikka, Neal2. Telehealth and Kidney Disease Care: Role after the Public Health Emergency?. *CJASN* 16(12):p 1784-1786, December 2021. | DOI: 10.2215/CJN.13651021
- Nayak KS, Ronco C, Karopadi AN, Rosner MH. Telemedicine and Remote Monitoring: Supporting the Patient on Peritoneal Dialysis. *Peritoneal Dialysis International*. 2016;36(4):362-366. doi:10.3747/pdi.2015.00021
- Chandra A, Rao N, Srivastava D. Initiating telenephrology in the coronavirus disease (COVID) era: a tertiary care experience in India. *Kidney Res Clin Pract*. 2021 Mar;40(1):175-176. doi: 10.23876/j.krcp.20.123. Epub 2021 Jan 21. PMID: 33789389; PMCID: PMC8041627.
- <https://journals.lww.com/kidney360/pages/articleviewer.aspx?year=2020&issue=06000&article=00020&type=Fulltext>

